

AMT Gateway Integrated with VLC

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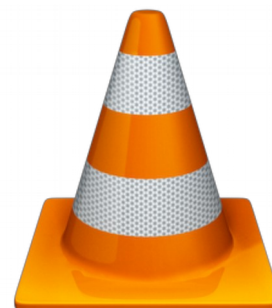
Herndon, VA, USA

Project

- Allow end users to access multicast content over the internet
 - Build AMT gateway implementation for widest possible usage

Candidate Platforms

- Web browser implementation
 - WebRTC – no multicast support
 - WebAssembly – no UDP support
- Plugin - deprecated
- Extension – no UDP support
- Progressive Web app – no UDP support (yet?)
- VLC integration
 - Supports multicast
 - Widely used
 - Available on all platforms!



Other VLC Benefits

- Already handles most major media types
- Modular
- Runs on almost any platform
- Fairly easy to use

VLC Module – AMT Access

- Created AMT access module
 - Passes multicast data to demuxer

- Credits
 - UTDallas
 - Jake Holland
 - Cisco – SSMAMTTools library
 - Concordia

Challenges

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 - Finding an appropriate path/technology
 - Duplicating IGMP, IP protocols
 - Understanding AMT
 - Receiving data, but audio is garbled and no video rendering
- Easier Tasks
 - Compiling VLC
 - Writing a module

To-Do List

- Add full IGMPv2 support
- Resolve/verify no memory leaks
- Periodic query/update timers
- Future: VLC has a browser plugin
- Successfully stream full video and audio from relay at TJ
- Submit a patch request/feature request to VLC

Impressions

- AMT
 - Moderately easy to understand/implement
 - Great for solving chicken/egg problem
 - RFC 7450 was good
- VLC
 - Documentation is good
 - IRC chat/forums was somewhat helpful
 - Easy to start developing

Questions or Comments?